IN THE CLAIMS

Please amend the claims as follows:

1.-23. (Cancelled)

24. (Withdrawn, Currently Amended): A method for screening an insecticidal substance, characterized in that it comprises:

a) bringing the test substance into contact with an acetylcholinesterase of claim 23 ~~as claimed in any one of claims 1 to 7, or an extract of modified cells as defined in claim 20, or a biological sample from a transgenic animal as defined in claim 23,~~ in the presence of acetylcholine or of one of its derivatives,

b) measuring~~, by any suitable means,~~ the acetylcholinesterase activity of the mixture obtained in a), and

c) selecting ~~the substances capable of inhibiting~~ that inhibits said activity.

25. (Cancelled)

26. (Withdrawn, Currently Amended): A reagent for screening an insecticidal substance[[s]], comprising an acetylcholinestase of claim 23 ~~characterized in that it is selected from the group consisting of the acetylcholinesterases as claimed in any one of claims 1 to 7, the recombinant vectors as claimed in claim 18, the modified cells as claimed in claim 20 and the transgenic animals as claimed in claim 23~~.

27. (Withdrawn, Currently Amended): A detection and/or screening kit, ~~characterized in that it~~ which includes at least one reagent of claim 26 ~~as claimed in claim 22 or claim 26~~.

28. (Withdrawn, Currently Amended): A method for screening inhibitors of an AChE1 of claim 23, comprising ~~as claimed in any one of claims 1 to 7, characterized in that it comprises~~:

(a) identifying a molecule[[s]] having a significant probability of binding to said AChE1;

(b) isolating ~~the~~ a potential inhibitor[[s]] identified in step (a);

(c) bringing the substance isolated in step (b) into contact with an AChE1 of claim 23 ~~as claimed in any one of claims 1 to 7, an extract of modified cells as defined in claim 20, a biological sample from a transgenic animal as defined in claim 23, or an extract of an insect sensitive or resistant to insecticides of the organophosphorus compound and carbamate class,~~ in the presence of acetylcholine or of one of its derivatives;

(d) measuring, ~~by any suitable means,~~ the acetylcholinesterase activity of the mixture obtained in (c); and

(e) verifying that the molecules isolated in (b) inhibit the AChE1 activity.

29. (New): An isolated or purified polypeptide comprising an amino acid sequence that is at least 90% identical to or 95% similar to with the amino acid sequence of SEQ ID NO: 1.

30. (New): The isolated or purified polypeptide of claim 29, which is at least 90% identical to SEQ ID NO: 1.

31. (New): The isolated or purified polypeptide of claim 29, which comprises SEQ ID NO: 1.

32. (New): The isolated or purified polypeptide of claim 29, which is an acetylcholinesterase.

33. (New): The isolated or purified polypeptide of claim 29, which is an insect acetylcholinesterase which comprises a central catalytic region which has an amino acid sequence selected from the group consisting of the sequence SEQ ID NO: 1 and the sequences exhibiting at least 90% identity or 95% similarity with the sequence SEQ ID NO: 1.

34. (New): The insect acetylcholinesterase of claim 33, which contains a mutation of the glycine located at position 119, to serine, with reference to the sequence of the *Torpedo californica* acetylcholinesterase.

35. (New): The acetylcholinesterase of claim 33, which is from an insect of the family *Culicidae*, selected from genera consisting of *Culex, Aedes* and *Anopheles*.

34. (New): The acetylcholinesterase of claim 33, which corresponds to that of an insect of the family *Culicidae* selected from the group consisting of the genera *Culex, Aedes* and *Anopheles*.

37. (New): The acetylcholinesterase of claim 33, which is sensitive organophosphorus and carbamate class insecticides, and comprises a sequence selected from the group consisting of:

SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 126 of *Anopheles gambiae*,

SEQ ID NO 7 of *Culex pipiens* (strain S-LAB), and

a sequence comprising a central catalytic region as defined in claim 1,

which sequences have a glycine at position 119, with reference to the sequence of the *Torpedo californica* acetylcholinesterase, included in a fragment of sequence SEQ ID NOS: 91, 92, 96, 102 to 112, 114, 115 and 117 to 119.

38. (New): The acetylcholinesterase of claim 33, in which the central catalytic region comprises an amino acid sequence selected from the group consisting of SEQ ID NO. 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 and 21.

39. (New): The acetylcholinesterase of claim 33, which comprises

an amino acid sequence selected from the group consisting of SEQ ID NO 57 and SEQ ID NO 122; and

a fragment of an amino acid sequence selected from the group consisting of SEQ ID NO: 90, 93, 94, 95, 97 to 101, 113 and 116, wherein said fragment spans approximately 150 contiguous amino acids of said sequence and is encoded by the third coding exon of the *ace-1* gene of a resistant insect as defined above, containing the substitution of G119S type, with reference to the sequence of *Torpedo californica* AChE.

40. (New): The acetylcholinesterase of claim 33, wherein said central catalytic region comprises an amino acid sequence selected from the group consisting of SEQ ID NO: 90, 93, 94, 95, 97, 98, 99, 100, 101, 113 and 116.

41. (New): A peptide fragment of the acetylcholinesterase of claim 33 which consists of 7 or more amino acids of said acetylcholinesterase.